cornerstone
A TETRA TECH COMPANY

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June 29, 2017

Mr. Skip Schupp
Area Gas Operations Manager II
Waste Management-Cottonwood Hills Landfill
10400 Hillstown Road
Marissa, IL 62257

Re: NSPS Surface Emissions Montioring - 2nd QTR 2017
Project Number 170403

Dear Mr. Schupp:

Cornerstone Environmental Group, LLC (Cornerstone) is pleased to provide this summary of the Second Quarter 2017 Surface Emissions Monitoring (SEM) monitoring event performed at the Cottonwood Hills Landfill located at 10400 Hillstown Road in Marissa, Illinois on June 15, 2017. This monitoring was conducted in accordance with requirements set forth in the New Source Performance Standard (NSPS), 40 CFR 60.755 (c) and (d) and 40 CFR 60, Appendix A Method 21, promulgated by the United States Environmental Protection Agency (USEPA).

The surface emissions monitoring was conducted using a Trimble SiteFID flame ionization detector (FID) calibrated to 500 part per million (ppm) as methane. The FID was calibrated in accordance with EPA Method 21, Appendix A requirements. The calibration log was completed by the field technician performing the SEM and a copy of the calibration log is included in Appendix A of this report.

Prior to monitoring, the Cornerstone field technician established background concentrations by taking upwind and downwind readings beyond the limits of the landfill at a distance of approximately 100 feet. Once background was established, Cornerstone's field technician monitored the surface of the landfill by following the approved site SEM path in a serpentine pattern at the uppermost elevation of the cell and along the perimieter at the toe of the landfill.

The SEM was conducted by holding the probe tip of the FID at approximately 2 to 4 inches above the ground surface. Surface monitoring locations were sampled at approximately 30 meters apart. Any areas suspected of exceeding surface emissions of 500 ppm above background based on visual observation, such as cracks or seeps in

the cover, were monitored. Active waste disposal areas and steep slopes were excluded for safety.

Monitoring Summary

There were no exceedances (FID reading greater than 500 parts per million (ppm) methane, above background measurements) detected during the monitoring. A site map depicting the monitoring route is attached as Figure 1

Weather Conditions

Monitoring was conducted during typical meteorological conditions.

June 15, 2017
Temperature: 85°F
Wind: NW at 8 mph
Conditions: Sunny

Sincerely,

Cornerstone Environmental Group, LLC

Jared Romaine
Project Manager

Mick Cossairt, R.G., L.G.
Senior Project Manager

Enclosures: Attachment A
Figure 1

ATTACHMENT A

CALIBRATION LOGS

WASTE MANAGEMENT
SURFACE EMISSION MONITORING
CALIBRATION AND PERTINENT DATA

Date: 6/15/2017 Site Name: Cottonwood

WEATHER OBSERVATIONS

Wind Speed: 8 MPH Wind Direction: Northwest Barometric Pressure: 29.91

Air Temperature: 85 deg F General Weather Conditions: Sunny

CALIBRATION INFORMATION

Pre-monitoring Calibration Precision Check

Procedure: Calibrate the instrument. Make a total of three measurements by alternating zero air and the calibration gas. Record the readings and calculate the average algebraic difference between the instrument reading and the calibration gas as a percentage. The calibration precision must be less than or equal to 10% of the calibration gas value.

Instrument ID: 0001950DBB31 Cal Gas Concentration: 500 ppm

Trial	Zero Air Reading	Cal Gas Reading	(Cal Gas Conc. - Cal Gas Reading)
1	0	499	1
2	0	502	2
3	0	504	4

Average Difference: 2.3

Calibration Precision = Average Difference/Cal Gas Conc. X 100%
0.8%

Post-monitoring Calibration Check

Zero Air Reading: 0 ppm Cal Gas Reading: 501 ppm

BACKGROUND CONCENTRATION CHECKS

Upwind Location Description: Northwest corner next main haul rode Reading: 0 ppm

Downwind Location Description: Southwest corner next to groud water well R311 Reading: 0 ppm

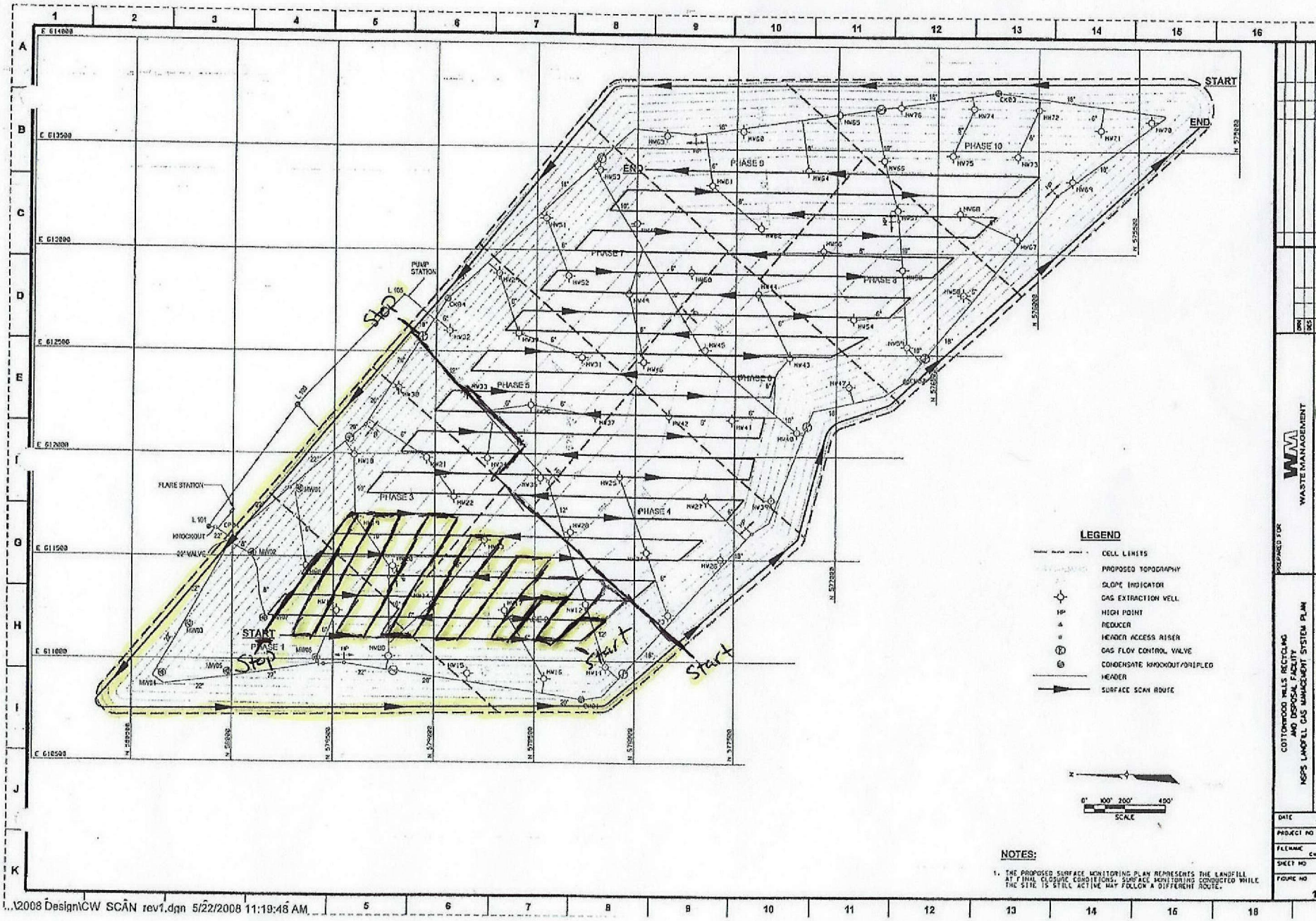
NOTES:

No exceedances were located during this monitoring event.

Field Technician - Devon Stolle

FIGURE 1

SURFACE EMISSIONS MONITORING ROUTE


START
END
PHASE 10
PHASE 9
PHASE 7
PHASE 8
PHASE 6
PHASE 5
PHASE 3
PHASE 4
PHASE 2
PHASE 1
PUMP STATION
FLARE STATION
KNOCKOUT
START
Stop
Start
LEGEND
CELL LIMITS
PROPOSED TOPOGRAPHY
SLOPE INDICATOR
GAS EXTRACTION WELL
HIGH POINT
REDUCER
HEADER ACCESS RISER
GAS FLOW CONTROL VALVE
CONDENSATE KNOCKOUT/TRIPLED
HEADER
SURFACE SCAN ROUTE
SCALE
NOTES:
1. THE PROPOSED SURFACE MONITORING PLAN REPRESENTS THE LANDFILL AT FINAL CLOSURE CONDITIONS. SURFACE MONITORING CONDUCTED WHILE THE SITE IS STILL ACTIVE MAY FOLLOW A DIFFERENT ROUTE.
PREPARED FOR
WASTE MANAGEMENT
COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
NDPS LANDFILL GAS MANAGEMENT SYSTEM PLAN
DATE
PROJECT NO
FILENAME
SHEET NO
FIGURE NO
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